



DESCRIPTION OF MAP UNITS

MELT-WATER DEPOSITS OF PINEDALE GLACIATION
(PLEISTOCENE)

Drift of the northern glacier--Elongate, rod-shaped deposit consisting of a thin veneer of loose silt and overlying till mounds and knittles. In places, a thin layer of stratified detritus is interspersed between the sand and the till. These mounds protrude through the sand cap locally, and rise some 1.5 m (5-10 ft) above the surrounding surface. A few angular boulders 0.5-1.5 m (2-5 ft) in diameter are scattered across surface of the drift.

The origin of the deposit is uncertain; one alternative is that it was formed when meltwaters of a wasting glacier deposited a layer of sand and gravel across a sheet of ice characterized by an irregular surface. Subsequent melting of the ice resulted in the hummocky terrain. Many of the kettles were probably formed when buried ice blocks melted, permitting the overlying sand and gravel to collapse into the resulting voids.

qcf Foothill facies—light brown to brown; consists of an unsorted mixture of gravel, cobbles, and boulders in a silty to clayey matrix. Clasts range in shape from angular to subrounded; must are subangular. Most clasts range from 0.1 to 6 cm (1/2-2 1/2 inches). Boulders are common. 0.5-4.5 m (2-15 ft) across are common. Clasts of green, gray, and purple argillite, of tan dolomite, and of tan quartzite and sandstone appear to be equally profuse. Of uncertain extent; confined to the southeast corner of this quadrangle. Forms a veneer of variable thickness over bedrock; extensively mantled by colluvium. Source of this till is unknown; likely it was deposited by an older glacier that flowed north in the Snake River valley prior to the advent of the younger glacier responsible for the drift that now mantles most of the valley floor. It may have been deposited, however, by an older glacier that flowed southward up the ancestral Snake River valley.

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Index map showing quadrangles in the Big Fork-Avon area. The Big Fork quadrangle is shaded. Preliminary surficial geologic maps of the following quadrangles, by I. J. Witkind, are available as U.S. Geological Survey Open-File Reports from the:

Open-File Services Section,
Branch of Distribution,
Box 25425, Federal Center,
Denver, Colorado 80225

Copies of the maps can be examined at the following offices:

Denver Public Inquiries Office,
U.S. Geological Survey,
1012, Federal Building,
1961 Stout Street,
Denver, Colorado 80202

Salt Lake City Public Inquiries Office,
U.S. Geological Survey,
8015, Federal Office Building,
125 South State Street
Salt Lake City, Utah 84111

Spokane Public Inquiries Office
U.S. Geological Survey,
678, U.S. Courthouse Building,
West 920 Riverside Avenue,
Spokane, Washington 99201

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|-----|---------------------------|--------|
| 1. | Big Ark | 78-174 |
| 2. | Cilly Creek | 77-860 |
| 3. | Condon (W. half) | 77-540 |
| 4. | Coopers Lake (S. half) | 77-466 |
| 5. | Crater Lake (W. half) | 78-173 |
| 6. | Gynnet Lake | 77-198 |
| 7. | Harland Lake (W. half) | 77-399 |
| 8. | Lake Inez | 77-200 |
| 9. | Ovando | 77-196 |
| 10. | Ovando Mountain (S. half) | 77-465 |
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| 12. | Salmon Lake | 77-197 |
| 13. | Salmon Prairie | 77-861 |
| 14. | Seelye Lake East | 77-202 |
| 15. | Seelye Lake West | 77-201 |
| 16. | Swan Lake (SW quarter) | 78-135 |
| 17. | Woodworth | 77-203 |
| 18. | Yew Creek (NE quarter) | 78-136 |

REFERENCE

Johns, W. M., 1970, Geology and mineral deposits of Lincoln and Flathead Counties Mont.: Montana Bur. Mines and Geology Bull. 79

By
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1978